

## Pranjal Sahu

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CONTACT INFORMATION	<p>psahu@cs.stonybrook.edu (631)-590-0490 https://www3.cs.stonybrook.edu/~psahu github.com/PranjalSahu stackoverflow.com/users/907770</p>
INTERESTS	Machine Learning, Computer Vision, Medical Imaging.
EDUCATION	<p><b>Stony Brook University, GPA: 3.87</b> Ph.D. Candidate in Computer Science (2016-2021 expected), Advisor: Dr. H. Qin Dissertation Topic: Synthetic Data for Deep Learning in Medical Imaging</p> <p><b>Indian Institute of Technology Kharagpur, GPA: 8.35</b> B.Tech.(Hons) in Computer Science, 2013</p>
HONORS AND AWARDS	<p>2018 Best Demo Award in SPIE Medical Imaging Conference 2016 Computer Science Chairman Fellowship, Stony Brook University 2005 Represented home state in National Children Science Congress</p>
INTERNSHIPS	<p>Segmentation of Lung CT in presence of severe pathologies. Improved recall of Tumor voxels from 0.56 to 0.87 and published the work in J-BHI journal. <b>Siemens Healthineers</b>, Malvern, PA. (2020)</p> <p>Large lung nodule detection in Siemens Syngo CT CAD <b>Siemens Healthineers</b>, Malvern, PA. (2019)</p> <p>Autonomous Infrastructure for Transition Prediction. <b>Brookhaven National Laboratory</b>, Computational Science Initiative (2017)</p>
WORK EXPERIENCE	<p>Ruby on Rails backend developer, handled consumer facing iOS and Android APIs. <b>Oyo Rooms</b>, Software Developer, Gurgaon, India. (2015-2016)</p> <p>Used Spark and HBase to create APIs for a real time mobile analytics dashboard. <b>HT Media</b>, Data Scientist, Gurgaon, India. (2015-2015)</p> <p>Handled performance related issues in Samsung Android smartphones. <b>Samsung Research Institute</b>, Software Engineer, Noida, India. (2013-2015)</p>
SKILLS	Python, C++, C, Matlab, Pytorch, Keras, Tensorflow, OpenCV, Numpy, Sklearn, Numba, Android SDK, Ruby on Rails, PostgreSQL, Spark, HBase, Git, Azure
INVITED TALK	<i>Deep Learning applications in Medical Imaging</i> , at Bell labs, Murray Hill (2019).
SELECTED PUBLICATIONS	<p><b>P. Sahu</b>, Y. Zhao, P. Bhatia, L. Bogoni, A. Jerebko, H. Qin. <i>Structure Correction for Robust Volume Segmentation in Presence of Tumors</i>, IEEE Journal of Biomedical and Health Informatics, J-BHI, 2020</p> <p><b>P. Sahu</b>, D. Yu, M. Dasari, F. Hou and H. Qin. <i>A Lightweight Multi-section CNN for Lung Nodule Classification and Malignancy Estimation</i>, IEEE Journal of Biomedical and Health Informatics, J-BHI, 2018.</p> <p><b>P. Sahu</b>, D. Yu and H. Qin. <i>Apply lightweight deep learning on internet of things for low-cost and easy-to-access skin cancer detection</i>, SPIE, 2018 (<b>Best Demo Award</b>).</p> <p>M. Dasari, A. Bhattacharya, S. Vargas, <b>P. Sahu</b>, A. Balasubramanian, S. Das. <i>Streaming 360 degree Videos using Super-resolution</i>, IEEE INFOCOM 2020.</p>

OTHER PUBLICATIONS	<p><b>P. Sahu</b>, H. Huang, W. Zhao, and H. Qin. <i>Using virtual digital breast tomosynthesis for de-noising of low-dose projection images</i>, International Symposium on Biomedical Imaging, ISBI 2019.</p> <p>H. Huang, X. Duan, <b>P. Sahu</b>, W. Zhao. <i>Effect of scatter correction on image noise in contrast-enhanced digital breast tomosynthesis</i>, IWBI 2020.</p> <p>X. Duan, <b>P. Sahu</b>, H. Huang, W. Zhao. <i>Scatter correction with deep learning approach for contrast enhanced digital breast tomosynthesis (CEDBT) in both cranio-caudal (CC) view and mediolateral oblique (MLO) view</i>, IWBI 2020 (<b>Oral</b>).</p> <p><b>P. Sahu</b>, D. Yu and K. Yager, M. Dasari and H. Qin. <i>In-Operando Tracking and Prediction of Transition in Material System using LSTM</i>, International Workshop on Autonomous Infrastructure for Science, HPDC, 2018.</p> <p>N. Song, D. Craciun et al. <i>Protein Shape Retrieval</i>, Eurographics Workshop on 3D Object Retrieval, 3DOR 2017.</p>	
CONFERENCE TALKS	<p><i>Lightweight Deep Learning on Internet of things</i> at SPIE, Houston (2018).</p> <p><i>Prediction of Transition in Material System using LSTM</i> at International Workshop on Autonomous Infrastructure for Science, HPDC, Phoenix, (2018).</p>	
SERVICE	<p>Reviewer for MICCAI, Journal of Medical Imaging (JMI), Ultrasonics Journal, Medical Physics</p> <p>Mentored Rutwik Palaskar (MIT ADT University, India) under the mentorship program at Machine Learning for Health (ML4H) workshop at NeurIPS 2020 on Oral Cancer detection work using pathology images.</p>	
TEACHING EXPERIENCE	Spring 2017	Teaching Assistant, Computer Graphics (Undergraduate)
	Spring 2017	Teaching Assistant, Medical Imaging (Undergraduate)
GRADUATE COURSEWORK	<input type="checkbox"/> Computer Graphics <input type="checkbox"/> Computer Vision <input type="checkbox"/> Convex Optimization	<input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Analysis of Algorithms <input type="checkbox"/> Computer Networks
SELECTED ACADEMIC PROJECTS	<p><i>Facial Action Unit Detection</i>, Computer Vision, (Tensorflow)  <a href="https://github.com/PranjalSahu/DRML">https://github.com/PranjalSahu/DRML</a></p> <p><i>Identification of user actions on Android apps</i>, Computer Networks, (Android)</p> <p><i>Point Cloud Triangulation</i>, Computer Graphics, (OpenGL, C++)  <a href="https://github.com/PranjalSahu/Point-Cloud-Triangulation">https://github.com/PranjalSahu/Point-Cloud-Triangulation</a></p> <p><i>Automatic construction of 3D models from Architectural Line drawings</i>, Computer Graphics (OpenGL, C++).  <a href="https://github.com/PranjalSahu/Automatic3DfromSketch">https://github.com/PranjalSahu/Automatic3DfromSketch</a></p>	
EXTRA CURRICULARS	<input type="checkbox"/> Silver medal in Inter Hall Thermocol and clay modelling at IIT Kharagpur <input type="checkbox"/> Member of Azad Hall of Residence Fine Arts team at IIT Kharagpur	
REFERENCES	Available on Request.	